

what is claimed is:
Patent Claims

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1. Microscope stand, especially for a surgical microscope, with vertical and horizontal tubular supports (1,2,16,40,97), characterized in that at least one of the supports (1,2,16,40,97) is made of two support materials with significantly different moduli of elasticity, with one support material concentrically enclosing the other, and/or that there is at least one damping layer (99) between high-strength parts of the stands and adjacent parts of the stand and/or between stand parts and the floor.
2. Microscope stand according to Claim 1, characterized in that one of the support materials is fiber-reinforced plastic, such as thermoplastic, duroplastic, thermosetting plastic (epoxide resin) or a mixture of them, and that the fiber material is carbon, aramid, glass, mineral or polyamide fibers or a mixture of them, while the other support material is metal with a comparatively low modulus of elasticity, e. g., aluminum.
3. Microscope stand according to Claim 2, characterized in that the fibers are oriented by at least one of the following winding methods: filament winding, braided tube, cloth and non-woven fabric, unidirectionally, or at zero angle to the length of the support.
4. Microscope stand according to one of the foregoing Claims, characterized in that the two support materials are connected to each other rigidly or through a damped thrust-elastic connection.
5. Microscope stand according to one of the foregoing Claims, characterized in that at least one of the supports (1,2,16,40,97), especially those made of fiber-reinforced plastic, has at least one, optionally metallic, interface (96) which connects it to an

adjacent part, or which divides and connects it, with the connection preferably made to be free of stress.

5 6. Microscope stand according to one of the foregoing Claims, characterized in that the damping layer (99) is assigned to at least one interface (96) and that this layer preferably comprises a mixed-cell foam of an elastomeric material.

10 7. Microscope stand according to Claim 5 or Claim 6, characterized in that any wheels (25) and/or positioning feet (100) of the stand base (23) are separated from them, or from the floor, with a damping layer (99).

15 8. Microscope stand according to one of the foregoing Claims, characterized in that the stand base (23) comprises a lower plate (107) and an upper plate (108) which are separated by a honeycomb structure (110) cemented in place.

9. Microscope stand according to Claim 8, characterized in that the two plates (107, 108) are rigidly fastened together at least one point, preferably by a bolt.

20 10. Microscope stand according to one of the foregoing Claims, characterized in that a positioning mechanism is provided to lower the adjusting feet (100), with which all the adjusting feet can be lowered simultaneously.

25 11. Microscope stand according to Claim 10, characterized in that the positioning means comprises a positioning chain (101), a gear wheel (105) and an eccentric mechanism (109).

12. Microscope stand according to one of the foregoing Claims, characterized in that at least one of the supports (1,2,16,40,97) is prestressed in its axial direction.

13. Microscope stand according to Claim 12, characterized in that the prestressing is produced by a central tensioning element (112a, 112b) which is stressed in tension with respect to the support (1,2,16,40,97) concerned.